



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION III  
Four Penn Center – 1600 John F Kennedy Blvd  
Philadelphia, Pennsylvania 19103-2852

**Report Title:** Geospatial Measurement of Air Pollution of PQ Corp Chester  
**Inspection Date(s):** 03/29/2023  
**Regulatory Program(s):** SIP, Title V, NSPS, MACT, NESHAP

**Company Name:** PQ LLC  
**Facility Name:** PQ Corp Chester  
**Facility Location:** 1201 W Front Street  
Chester, PA 19013

**Latitude:** 39.840401 **Longitude:** -75.372368  
**County/Parish:** Delaware County

**AFS/ICIS-Air Number:** PA000238534  
**Permit Number:** 23-00016  
**NAICS Code:** 325180 **SIC:** 2819  
**Unique Project #:** 3E23CA089A

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Date

**Supervisor**

Signature

**Kristen Hall**

Date

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## **I. Introduction**

The United States Environmental Protection Agency (EPA) conducted a Geospatial Measurement of Air Pollution (GMAP) evaluation at PQ Corp Chester (PQ or Facility) to determine if elevated levels of compounds were present. The Pennsylvania Department of Environmental Protection (PA DEP) was notified of the inspection on March 15, 2023, via email. On March 29, 2023, EPA notified the Facility of the planned inspection via phone.

### **A. Summary of the Facility**

The Facility is located at 1201 W Front Street, Chester, PA 19013. PQ Corp Chester produces sodium silicate by processing soda ash it receives from a barge terminal on the Delaware River. PQ's product is mostly consumed by Evonik Corp Chester, which is located adjacent to PQ and is transferred via a pipe between the facilities.

The Facility received a Title V Permit (23-00016) from PA DEP issued on March 11, 2022.

PQ Corp Chester is classified as major source for Carbon Monoxide (CO), Nitrogen Oxides (NO<sub>x</sub>), Sulfur Oxides (SO<sub>x</sub>), Volatile Organic Compounds (VOCs), Hazardous Air Pollutants (HAP) and Particulate Matter (PM). The Facility is subject to, or potentially subject to the following federal regulations:

- 40 CFR Part 60 Subpart Dc: Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units
- 40 CFR Part 60 Subpart IIII: Standards of Performance for Stationary Compression Ignition Internal Combustion Engines
- 40 CFR Part 63 Subpart JJJJJ: National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources

### **B. Inspection Opening Conference**

At 3:11 PM on March 29, 2023, EPA inspectors arrived at the Facility for a Clean Air Act (CAA) Inspection and conducted a brief opening conference. PQ was represented by Joe Lala, Senior EHS Manager. Also, Heather Henry, PA DEP was present. EPA inspectors, Parmatma Adhikari, Nicholas Bobbs, Philip Myers, and Scott Yanos, presented their credentials and explained the purpose of the visit was to conduct a Geospatial Measurement of Air Pollution (GMAP) monitoring. EPA inspector Nichola Bobbs explained that the GMAP vehicle has the capability to monitor Hydrogen Sulfide (H<sub>2</sub>S), Volatile Organic Compounds (VOCs), Methane (CH<sub>4</sub>), Sulfur Dioxide (SO<sub>2</sub>) and Benzene (C<sub>6</sub>H<sub>6</sub>).

## II. Site Activity/Process Description

PQ Corp produces sodium silicate ( $\text{Na}_2\text{SiO}_3$ ) by heating the soda ash it receives from the barge terminal to high temperatures to produce a reaction with silica sand which forms water glass. It is then crushed, dissolved in water, and digested under pressure with steam. Joe Lala mentioned that PQ uses a natural gas-fired glass furnace to form sodium silicate.

The opening conference concluded at 3:21 PM.

## III. Observations

EPA inspectors were led on a drive through of the Facility at 3:22 PM by Joe Lala of PQ and Heather Henry of PA DEP also present for the drive through. Joe Lala, Heather Henry, and Scott Yanos walked the perimeter of the facility while Nick Bobbs, Phil Myers and Parmatma Adhikari followed in the GMAP vehicle. It is noted that at the time of the GMAP evaluation, the process furnace was not operating to produce the sodium silicate.

The EPA GMAP vehicle was lead through the perimeter of the Facility. EPA observed GMAP readings which are represented in Table 1. A designation of “elevated” means elevated concentrations of the listed pollutant were measured above the background level using the GMAP. Actual numeric concentration readings observed during the monitoring event were not yet verified at the time of this report, but can be shared with the Facility, once the data becomes verified.

| TABLE 1 |                  |      |                 |                 |                               |                      |
|---------|------------------|------|-----------------|-----------------|-------------------------------|----------------------|
| Time    | H <sub>2</sub> S | VOCs | CH <sub>4</sub> | SO <sub>2</sub> | C <sub>6</sub> H <sub>6</sub> | Approximate Location |
| 3:25 pm |                  |      | Elevated        |                 |                               | Barge Terminal       |

The drive through concluded at 3:35 PM.

## IV. Closing Conference

After the drive through, EPA inspectors, Joe Lala and Heather Henry had a brief closing conference to ask additional questions and discuss observations. The EPA inspectors noted that the investigation is on-going, and any areas of concern identified in the final report do not necessarily reflect a violation or deviation, rather, they are areas that will require further investigation. EPA also noted that they would issue an inspection report within in 60 days, with a copy to the State. Simultaneously, EPA will perform a detailed review of records and may have additional questions.

The following have been identified as *potential* issues during the inspection. They are issues that require either further investigation by EPA or additional information or explanation by PQ Corps.

- Elevated methane emissions

The inspection concluded at 3:40 PM.